

Title (en)

METHOD FOR RECYCLING SCRAP CONTAINING ALUMINIUM-LITHIUM-TYPE ALLOYS

Title (de)

VERFAHREN ZUR REZYKLIERUNG VON LEGIERUNGEN VOM ALUMINIUM-LITHIUM-TYP ENTHALTENDEN SCHROTT

Title (fr)

PROCÉDÉ DE RECYCLAGE DE SCRAP D'ALLIAGES DE TYPE ALUMINIUM-LITHIUM

Publication

EP 1913166 A2 20080423 (FR)

Application

EP 06794278 A 20060803

Priority

- FR 2006001887 W 20060803
- FR 0508336 A 20050804

Abstract (en)

[origin: WO2007015013A2] The invention relates to a method for melting scrap consisting of alloy components containing lithium. According to said method, (i) scrap containing aluminium-lithium-type alloys is collected (collection step); (ii) an initial bed of a liquid metal consisting of a first composition is prepared in a smelting furnace (preparation step for the initial bed of liquid metal); (iii) the scrap is loaded onto the initial bed of liquid metal in such a way as to create a floating blanket of the scrap with a controlled thickness on the surface of the bed of liquid metal (loading step), said blanket partially melting as it comes into contact with the bed of liquid metal in such a way as to obtain a bath of liquid metal consisting of a second composition that can be the same as, or different from, the first composition, and the lithium content of the bath of liquid metal consisting of a second composition amounting to between 0.1 %, preferably 0.2 %, and 2.5 % wt. % of the total weight; and (iv) the liquid metal is extracted (extraction step) from the bath of liquid metal consisting of a second composition. The inventive method is technically and economically advantageous in that it does not require investment into a particular installation, especially containing an inert atmosphere, and it does not require, or at least minimises, the use of expensive consumables such as inert gas, as the formation of a blanket of scrap with a controlled thickness enables the surface of the liquid metal to be protected from oxidation in a surprisingly efficient manner.

IPC 8 full level

C22B 7/00 (2006.01); **C22C 21/00** (2006.01)

CPC (source: EP US)

C22B 21/0069 (2013.01 - EP US); **C22B 21/0092** (2013.01 - EP US); **C22B 21/06** (2013.01 - EP US); **C22C 1/026** (2013.01 - EP US); **C22C 21/00** (2013.01 - EP US); **Y02P 10/20** (2015.11 - EP US); **Y10S 266/901** (2013.01 - EP US)

Citation (search report)

See references of WO 2007015013A2

Cited by

FR3126426A1; WO2023031545A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

FR 2889541 A1 20070209; **FR 2889541 B1 20070928**; AT E509125 T1 20110515; CN 101238228 A 20080806; CN 101238228 B 20110413; EP 1913166 A2 20080423; EP 1913166 B1 20110511; ES 2366383 T3 20111019; US 2007062336 A1 20070322; US 7550028 B2 20090623; WO 2007015013 A2 20070208; WO 2007015013 A3 20070315

DOCDB simple family (application)

FR 0508336 A 20050804; AT 06794278 T 20060803; CN 200680028805 A 20060803; EP 06794278 A 20060803; ES 06794278 T 20060803; FR 2006001887 W 20060803; US 46262406 A 20060804